

Appln. No. 09/856,298
Amdt. dated August 20, 2003
Reply to Office action of June 23, 2003

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-54 (Cancelled)

55(Previously presented). A vector comprising the nucleotide sequence according to claim 77.

56(Previously presented). Transformed cells having the nucleotide sequence according to 77 in an expressible state.

57(Currently amended). A process for producing a protein which comprises culturing cells transformed with the nucleotide sequence according to (i) to ([xxxiii] xv), ([xliii] xxv) to ([lx] xlii) or ([lxiv] xlix) to ([lxxxvi] liv) of claim 77 or a fragment thereof, and collecting hBSSP4 produced.

Claim 58 (Cancelled)

59(Previously presented). The process according to claim 57, wherein the cells are *E. coli* cells, animal cells or insect cells.

60(Withdrawn). A non-human transgenic animal whose expression level of BSSP4 gene has been altered.

61(Withdrawn). The non-human transgenic animal

according to claim 60, wherein BSSP4 gene is cDNA, genomic DNA or synthetic DNA encoding BSSP4.

62(Withdrawn). The non-human transgenic animal according to claim 60, wherein the expression level has been altered by mutating a gene expression regulatory site.

63(Withdrawn). A knockout mouse whose mBSSP4 gene function is deficient.

64(Withdrawn). An antibody against the protein according to claim 76 or a fragment thereof.

65(Withdrawn). The antibody according to claim 64 which is a polyclonal antibody, a monoclonal antibody or a peptide antibody.

66(Withdrawn). A process for producing a monoclonal antibody against the protein according to claim 76 or a fragment thereof which comprises administering the protein according to claim 76 or a fragment thereof to a warm-blooded animal other than a human being, selecting the animal whose antibody titer is recognized, collecting its spleen or lymph node, fusing the antibody producing cells contained therein with myeloma cells to prepare a monoclonal antibody producing hybridoma.

67(Withdrawn). A method for determining the protein according to claim 76 or a fragment thereof in a specimen which is based on immunological binding of an antibody against

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the protein or a fragment thereof to the protein or a fragment thereof.

68(Withdrawn). A method for determining hBSSP4 or a fragment thereof in a specimen which comprises reacting a monoclonal antibody or a polyclonal antibody against the protein (a) to ([[v]] i) or ([[cc]] g) to ([[nn]] bb) of claim 76 or a modified derivative or fragment thereof and a labeled antibody with hBSSP4 or a fragment thereof in the specimen to detect a sandwich complex produced.

69(Withdrawn). A method for determining hBSSP4 or a fragment thereof in a specimen which comprises reacting a monoclonal antibody or a polyclonal antibody against the protein (a) to ([[v]] i) or ([[cc]] g) to ([[nn]] bb) of claim 76 or a modified derivative or fragment thereof or a fragment thereof with labeled hBBSP4 and hBSSP4 or a fragment thereof in the specimen competitively to detect an amount of hBSSP4 or a fragment thereof in the specimen based on an amount of the labeled hBBSP4 reacted with the antibody.

70(Withdrawn). The method according to claim 67, wherein the specimen is a body fluid.

71(Withdrawn). A diagnostic marker for diseases in tissues comprising the protein according to claim 76.

72(Withdrawn). The marker according to claim 71 to be used for diagnosis of Alzheimer's disease or epilepsy in brain.

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73(Withdrawn). The marker according to claim 71 to be used for diagnosis of cancer or inflammation of brain, prostate or testicle.

74(Withdrawn). The marker according to claim 71 to be used for diagnosis of sterility in semen or sperms.

75(Withdrawn). The marker according to claim 71 to be used for diagnosis of prostatic hypertrophy in prostate.

76(Currently amended). A protein selected from the group consisting of:

(a) a protein having the amino acid sequence composed of 268 amino acids represented by the 1st to 268th amino acids of SEQ ID NO:2;

(b) a protein having an amino acid sequence derived from the amino acid sequence represented by SEQ ID NO:2 by deletion, substitution or addition of one to several amino acids and having the same property as that of the protein having the amino acid sequence represented by the 1st to 268th amino acids of SEQ ID NO:2;

(c) a protein having the amino acid sequence composed of 270 amino acids represented by the 1st to 270th amino acids of SEQ ID NO:4;

(d) a protein having an amino acid sequence derived from the amino acid sequence represented by the 1st to 270th amino acids of SEQ ID NO:4 by deletion, substitution or addition of one to several amino acids and having the same property as that of the protein having the amino acid sequence

represented by the 1st to 270th amino acids of SEQ ID NO:4;

(e) a protein having the amino acid sequence composed of 257 amino acids represented by the 1st to 257th amino acids of SEQ ID NO:6;

(f) a protein having an amino acid sequence derived from the amino acid sequence represented by the 1st to 257th amino acids of SEQ ID NO:6 by deletion, substitution or addition of one to several amino acids and having the same property as that of the protein having the amino acid sequence represented by the 1st to 257th amino acids of SEQ ID NO:6;

~~(g) a protein having the amino acid sequence composed of 97 amino acids represented by the 1st to 97th amino acids of SEQ ID NO:8;~~

~~—————(h) a protein having an amino acid sequence derived from the amino acid sequence represented by the 1st to 97th amino acids of SEQ ID NO:8 by deletion, substitution or addition of one to several amino acids and having the same property as that of the protein having the amino acid sequence represented by the 1st to 97th amino acids of SEQ ID NO:8;~~

~~—————(i) a protein having the amino acid sequence composed of 158 amino acids represented by the 1st to 158th amino acids of SEQ ID NO:10;~~

~~—————(j) a protein having an amino acid sequence derived from the amino acid sequence represented by the 1st to 158th amino acids of SEQ ID NO:10 by deletion, substitution or addition of one to several amino acids and having the same property as that of the protein having the amino acid sequence represented by the 1st to 158th amino acids of SEQ ID NO:10;~~

~~————— (k) a protein having the amino acid sequence
composed of 82 amino acids represented by the 1st to 82nd
amino acids of SEQ ID NO:12;~~

~~————— (l) a protein having an amino acid sequence derived
from the amino acid sequence represented by the 1st to 82nd
amino acids of SEQ ID NO:12 by deletion, substitution or
addition of one to several amino acids and having the same
property as that of the protein having the amino acid sequence
represented by the 1st to 82nd amino acids of SEQ ID NO:12;~~

~~————— (m) a protein having the amino acid sequence
composed of 185 amino acids represented by the 1st to 185th
amino acids of SEQ ID NO:14;~~

~~————— (n) a protein having an amino acid sequence derived
from the amino acid sequence represented by the 1st to 185th
amino acids of SEQ ID NO:14 by deletion, substitution or
addition of one to several amino acids and having the same
property as that of the protein having the amino acid sequence
represented by the 1st to 185th amino acids of SEQ ID NO:14;~~

~~————— (o) a protein having the amino acid sequence
composed of 80 amino acids represented by the 1st to 80th
amino acids of SEQ ID NO:16;~~

~~————— (p) a protein having an amino acid sequence derived
from the amino acid sequence represented by the 1st to 80th
amino acids of SEQ ID NO:16 by deletion, substitution or
addition of one to several amino acids and having the same
property as that of the protein having the amino acid sequence
represented by the 1st to 80th amino acids of SEQ ID NO:16;~~

~~————— (q) a protein having the amino acid sequence~~

~~composed of 253 amino acids represented by the 1st to 253rd
amino acids of SEQ ID NO:18,~~

~~(r) a protein having an amino acid sequence derived
from the amino acid sequence represented by the 1st to 253rd
amino acids of SEQ ID NO:18 by deletion, substitution or
addition of one to several amino acids and having the same
property as that of the protein having the amino acid sequence
represented by the 1st to 253rd amino acids of SEQ ID NO:18,~~

([s]) g) a protein having the amino acid sequence
composed of 34 amino acids represented by the -49th to -16th
amino acids of SEQ ID NO:2;

([t]) h) a protein having an amino acid sequence
derived from the amino acid sequence represented by the -49th
to -16th amino acids of SEQ ID NO:2 by deletion, substitution
or addition of one to several amino acids and having the same
property as that of the protein having the amino acid sequence
represented by the -49th to -16th amino acids of SEQ ID NO:2;

([u]) i) a protein having the amino acid sequence
composed of 15 amino acids represented by the -15th to -1st
amino acids of SEQ ID NO:2;

([v]) j) a protein having an amino acid sequence
derived from the amino acid sequence represented by the -15th
to -1st amino acids of SEQ ID NO:2 by deletion, substitution
or addition of one to several amino acids and having the same
property as that of the protein having the amino acid sequence
represented by the -15th to -1st amino acids of SEQ ID NO:2;

([w]) k) a protein having the amino acid sequence
composed of 259 amino acids represented by the 1st to 259th

amino acids of SEQ ID NO:20;

([[x]] l) a protein having an amino acid sequence derived from the amino acid sequence represented by the 1st to 259th amino acids of SEQ ID NO:20 by deletion, substitution or addition of one to several amino acids and having the same property as that of the protein having the amino acid sequence represented by the 1st to 259th amino acids of SEQ ID NO:20;

([[y]] m) a protein having the amino acid sequence composed of 34 amino acids represented by the -49th to -16th amino acids of SEQ ID NO:20;

([[z]] n) a protein having an amino acid sequence derived from the amino acid sequence represented by the -49th to -16th amino acids of SEQ ID NO:20 by deletion, substitution or addition of one to several amino acids and having the same property as that of the protein having the amino acid sequence represented by the -49th to -16th amino acids of SEQ ID NO:20;

([[aa]] o) a protein having the amino acid sequence composed of 15 amino acids represented by the -15th to -1st amino acids of SEQ ID NO:20;

([[bb]] p) a protein having an amino acid sequence derived from the amino acid sequence represented by the -15th to -1st amino acids of SEQ ID NO:20 by deletion, substitution or addition of one to several amino acids and having the same property as that of the protein having the amino acid sequence represented by the -15th to -1st amino acids of SEQ ID NO:20;

([[cc]] q) a protein having the amino acid sequence composed of 317 amino acids represented by the -49th to 268th amino acids of SEQ ID NO:2;

(r) a protein having an amino acid sequence derived from the amino acid sequence represented by the -49th to 268th amino acids of SEQ ID NO:2 by deletion, substitution or addition of one to several amino acids and having the same property as that of the protein having the amino acid sequence represented by the -49th to 268th amino acids of SEQ ID NO:2;

(s) a protein having the amino acid sequence composed of 283 amino acids represented by the -15th to 268th amino acids of SEQ ID NO:2;

(t) a protein having an amino acid sequence derived from the amino acid sequence represented by the -15th to 268th amino acids of SEQ ID NO:2 by deletion, substitution or addition of one to several amino acids and having the same property as that of the protein having the amino acid sequence represented by the -15th to 268th amino acids of SEQ ID NO:2;

(u) a protein having the amino acid sequence composed of 319 amino acids represented by the -49th to 270th amino acids of SEQ ID NO:4;

(v) a protein having an amino acid sequence derived from the amino acid sequence represented by the -49th to 270th amino acids of SEQ ID NO:4 by deletion, substitution or addition of one to several amino acids and having the same property as that of the protein having the amino acid sequence represented by the -49th to 270th amino acids of SEQ ID NO:4;

(w) a protein having the amino acid sequence composed of 285 amino acids represented by the -15th to 270th amino acids of SEQ ID NO:4;

(x) a protein having an amino acid sequence

derived from the amino acid sequence represented by the -15th to 270th amino acids of SEQ ID NO:4 by deletion, substitution or addition of one to several amino acids and having the same property as that of the protein having the amino acid sequence represented by the -15th to 270th amino acids of SEQ ID NO:4;

([[kk]] y) a protein having the amino acid sequence composed of 306 amino acids represented by the -49th to 257th amino acids of SEQ ID NO:6;

([[ll]] z) a protein having an amino acid sequence derived from the amino acid sequence represented by the -49th to 257th amino acids of SEQ ID NO:6 by deletion, substitution or addition of one to several amino acids and having the same property as that of the protein having the amino acid sequence represented by the -49th to 257th amino acids of SEQ ID NO:6;

([[mm]] aa) a protein having the amino acid sequence composed of 272 amino acids represented by the -15th to 257th amino acids of SEQ ID NO:6;

([[nn]] bb) a protein having an amino acid sequence derived from the amino acid sequence represented by the -15th to 257th amino acids of SEQ ID NO:6 by deletion, substitution or addition of one to several amino acids and having the same property as that of the protein having the amino acid sequence represented by the -15th to 257th amino acids of SEQ ID NO:6;

([[oo]] cc) a protein having the amino acid sequence composed of 308 amino acids represented by the -49th to 259th amino acids of SEQ ID NO:20;

([[pp]] dd) a protein having an amino acid sequence derived from the amino acid sequence represented by the -49th

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to 259th amino acids of SEQ ID NO:20 by deletion, substitution or addition of one to several amino acids and having the same property as that of the protein having the amino acid sequence represented by the -49th to 259th amino acids of SEQ ID NO:20;

([[qq]] ee) a protein having the amino acid sequence composed of 274 amino acids represented by the -15th to 259th amino acids of SEQ ID NO:20;

([[rr]] ff) a protein having an amino acid sequence derived from the amino acid sequence represented by the -15th to 259th amino acids of SEQ ID NO:20 by deletion, substitution or addition of one to several amino acids and having the same property as that of the protein having the amino acid sequence represented by the -15th to 259th amino acids of SEQ ID NO:20; and

([[ss]] gg) a modified derivative or fragment of these proteins (a) to ([[rr]] ff).

77(Currently amended). A nucleotide sequence selected from the group consisting of:

(i) a nucleotide sequence represented by the 151st to 954th nucleotides of SEQ ID NO:1;

(ii) a nucleotide sequence encoding the amino acid sequence represented by the 1st to 268th amino acids of SEQ ID NO:2;

(iii) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence (i) or (ii) under stringent conditions and encoding a protein having the same property as that of the

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protein having the amino acid sequence represented by the 1st to 268th amino acids of SEQ ID NO:2;

(iv) a nucleotide sequence represented by the 151st to 960th nucleotides of SEQ ID NO:3;

(v) a nucleotide sequence encoding the amino acid sequence represented by the 1st to 270th amino acids of SEQ ID NO:4;

(vi) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence (iv) or (v) under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by the 1st to 270th amino acids of SEQ ID NO:4;

(vii) a nucleotide sequence represented by the 151st to 921st nucleotides of SEQ ID NO:5;

(viii) a nucleotide sequence encoding the amino acid sequence represented by the 1st to 257th amino acids of SEQ ID NO:6;

(ix) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence (vii) or (viii) under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by the 1st to 257th amino acids of SEQ ID NO:6;

~~(x) a nucleotide sequence represented by the 151st to 441st nucleotides of SEQ ID NO:7;~~

~~—(xi) a nucleotide sequence encoding the amino acid sequence represented by the 1st to 97th amino acids of SEQ ID~~

~~NO:8,~~

~~—— (xii) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence (x) or (xi) under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by the 1st to 97th amino acids of SEQ ID NO:8,~~

~~—— (xiii) a nucleotide sequence represented by the 151st to 624th nucleotides of SEQ ID NO:9,~~

~~—— (xiv) a nucleotide sequence encoding the amino acid sequence represented by the 1st to 158th amino acids of SEQ ID NO:10,~~

~~—— (xv) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence (xiii) or (xiv) under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by the 1st to 158th amino acids of SEQ ID NO: 10,~~

~~—— (xvi) a nucleotide sequence represented by the 151th to 396th nucleotides of SEQ ID NO:11,~~

~~—— (xvii) a nucleotide sequence encoding the amino acid sequence represented by the 1st to 82nd amino acids of SEQ ID NO:12,~~

~~—— (xviii) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence (xvi) or (xvii) under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by the 1st~~

~~to 82th amino acids of SEQ ID NO:12;~~

~~—— (xix) a nucleotide sequence represented by the
151st to 705th nucleotides of SEQ ID NO:13;~~

~~—— (xx) a nucleotide sequence encoding the amino acid
sequence represented by the 1st to 185th amino acids of SEQ ID
NO:14;~~

~~—— (xxi) a nucleotide sequence hybridizable with a
nucleotide sequence which is complementary to the above
nucleotide sequence (xiv) or (xx) under stringent conditions
and encoding a protein having the same property as that of the
protein having the amino acid sequence represented by the 1st
to 185th amino acids of SEQ ID NO:14;~~

~~—— (xxii) a nucleotide sequence represented by the
151st to 390th nucleotides of SEQ ID NO:15;~~

~~—— (xxiii) a nucleotide sequence encoding the amino
acid sequence represented by the 1st to 80th amino acids of
SEQ ID NO:16;~~

~~—— (xxiv) a nucleotide sequence hybridizable with a
nucleotide sequence which is complementary to the above
nucleotide sequence (xxii) or (xxiii) under stringent
conditions and encoding a protein having the same property as
that of the protein having the amino acid sequence represented
by the 1st to 80th amino acids of SEQ ID NO:16;~~

~~—— (xxv) a nucleotide sequence represented by the
151st to 909th nucleotides of SEQ ID NO:17;~~

~~—— (xxvi) a nucleotide sequence encoding the amino
acid sequence represented by the 1st to 253rd amino acids of
SEQ ID NO:18;~~

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~~(xxvii) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence (xxv) or (xxvi) under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by the 1st to 253rd amino acids of SEQ ID NO:18;~~

([[xxviii]] x) a nucleotide sequence represented by the 4th to 105th nucleotides of SEQ ID NO:1;

([[xxix]] xii) a nucleotide sequence encoding the amino acid sequence represented by the -49th to -16th amino acids of SEQ ID NO:2;

([[xxx]] xii) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence ([xxviii]] x) or ([xxix]] xi) under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by the -49th to -16th amino acids of SEQ ID NO:2;

([[xxxi]] xiii) a nucleotide sequence represented by the 106th to 150th nucleotides of SEQ ID NO:1;

([[xxxii]] xiv) a nucleotide sequence encoding the amino acid sequence represented by the -15th to -1st amino acids of SEQ ID NO:2;

([[xxxiii]] xv) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence ([xxxi]] xiii) or ([xxxii]] xiv) under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by the -15th to -1st amino acids of SEQ ID NO:2;

(xxxiv) xvi) a nucleotide sequence represented by the 227th to 1003rd nucleotides of SEQ ID NO:19;

(xxxv) xvii) a nucleotide sequence encoding the amino acid sequence represented by the 1st to 259th amino acids of SEQ ID NO:20;

(xxxvi) xviii) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence (xxxiv) xvi) or (xxxv) xvii) under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by the 1st to 259th amino acids of SEQ ID NO:20;

(xxxvii) xix) a nucleotide sequence represented by the 80th to 181st nucleotides of SEQ ID NO:19;

(xxxviii) xx) a nucleotide sequence encoding the amino acid sequence represented by the -49th to -16th amino acids of SEQ ID NO:20;

(xxxix) xxi) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence (xxxvii) xix) or (xxxviii) xx) under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by the -49th to -16th amino acids of SEQ ID NO:20;

(xl) xxii) a nucleotide sequence represented by the 182th to 226th nucleotides of SEQ ID NO:19;

(xli) xxiii) a nucleotide sequence encoding the amino acid sequence represented by the -15th to -1st amino acids of SEQ ID NO:20;

(xlii) xxiv) a nucleotide sequence hybridizable

with a nucleotide sequence which is complementary to the above nucleotide sequence ([xl] xxii) or ([xli] xxiii) under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by the -15th to -1st amino acids of SEQ ID NO:20;

([xliii] xxv) a nucleotide sequence represented by the 4th to 954th nucleotides of SEQ ID NO:1;

([xliv] xxvi) a nucleotide sequence encoding the amino acid sequence represented by the -49th to 268th amino acids of SEQ ID NO:2;

([xlv] xxvii) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence ([xliii] xxv) or ([xliv] xxvi) under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by the -49th to 268th amino acids of SEQ ID NO:2;

([xlvi] xxviii) a nucleotide sequence represented by the 106th to 954th nucleotides of SEQ ID NO:1;

([xlvii] xxix) a nucleotide sequence encoding the amino acid sequence represented by the -15th to 268th amino acids of SEQ ID NO:2;

([xlviii] xxx) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence ([xlvi] xxviii) or ([xlvii] xxix) under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by the -15th to 268th amino acids of SEQ ID NO:2;

([[xlix]] xxxi) a nucleotide sequence represented by the 4th to 960th nucleotides of SEQ ID NO:3;

([[l]] xxxii) a nucleotide sequence encoding the amino acid sequence represented by the -49th to 270th amino acids of SEQ ID NO:4;

([[li]] xxxiii) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence ([[xlix]] xxxi) or ([[l]] xxxii) under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by the -49th to 270th amino acids of SEQ ID NO:4;

([[lii]] xxxiv) a nucleotide sequence represented by the 106th to 960th nucleotides of SEQ ID NO:3;

([[liii]] xxxv) a nucleotide sequence encoding the amino acid sequence represented by the -15th to 270th amino acids of SEQ ID NO:4;

([[liv]] xxxvi) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence ([[lii]] xxxiv) or ([[liv]] xxxvi) under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by the -15th to 270th amino acids of SEQ ID NO:4;

([[lv]] xxxvii) a nucleotide sequence represented by the 4th to 921th nucleotides of SEQ ID NO:5;

([[lvi]] xxxviii) a nucleotide sequence encoding the amino acid sequence represented by the -49th to 257th amino acids of SEQ ID NO:6;

([[lvii]] xxxix) a nucleotide sequence hybridizable

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with a nucleotide sequence which is complementary to the above nucleotide sequence ([[lv]] xxxvii) or ([[lvi]] xxxviii) under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by the -49th to 257th amino acids of SEQ ID NO:6;

([[lviii]] xl) a nucleotide sequence represented by the 106th to 921th nucleotides of SEQ ID NO:5;

([[lix]] xli) a nucleotide sequence encoding the amino acid sequence represented by the -15th to 257th amino acids of SEQ ID NO:6;

([[lx]] xlii) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence ([[lviii]] xl) or ([[lix]] xli) under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by the -15th to 257th amino acids of SEQ ID NO:6;

([[lxi]] xliii) a nucleotide sequence represented by the 80th to 1003rd nucleotides of SEQ ID NO:19;

([[lxii]] xliv) a nucleotide sequence encoding the amino acid sequence represented by the -49th to 259th amino acids of SEQ ID NO:20;

([[lxiii]] xlvi) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence ([[lxi]] xliii) or ([[lxii]] xliv) under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by the -49th to 259th amino acids of SEQ ID NO:20;

([[lxiv]] xlvi) a nucleotide sequence represented by

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the 182nd to 1003rd nucleotides of SEQ ID NO:19;

([[lxv]] xlvi) a nucleotide sequence encoding the amino acid sequence represented by the -15th to 259th amino acids of SEQ ID NO:20;

([[lxvi]] xlvi) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence ([[lxiv]] xlvi) or ([[lxv]] xlvi) under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by the -15th to 259th amino acids of SEQ ID NO:20;

([[lxvii]] xlvi) a nucleotide sequence represented by SEQ ID NO:1;

([[lxviii]] l) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence ([[lxvii]] xlvi) under stringent conditions and encoding a protein having the same property as that of the protein encoded by the nucleotide sequence represented by SEQ ID NO:1;

([[lxiv]] li) a nucleotide sequence represented by SEQ ID NO:3;

([[lxx]] lii) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence ([[lxix]] li) under stringent conditions and encoding a protein having the same property as that of the protein encoded by the nucleotide sequence represented by SEQ ID NO:3;

([[lxxi]] liii) a nucleotide sequence represented by SEQ ID NO:5;

(~~[[lxxii]]~~ liv) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence (~~[[lxxi]]~~ liii) under stringent conditions and encoding a protein having the same property as that of the protein encoded by the nucleotide sequence represented by SEQ ID NO:5;

~~——(lxxiii) a nucleotide sequence represented by SEQ ID NO:7;~~

~~——(lxxiv) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence (lxxiii) under stringent conditions and encoding a protein having the same property as that of the protein encoded by the nucleotide sequence represented by SEQ ID NO:7;~~

~~——(lxxv) a nucleotide sequence represented by SEQ ID NO:9;~~

~~——(lxxvi) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence (lxxv) under stringent conditions and encoding a protein having the same property as that of the protein encoded by the nucleotide sequence represented by SEQ ID NO:9;~~

~~——(lxxvii) a nucleotide sequence represented by SEQ ID NO:11;~~

~~——(lxxviii) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence (lxxvii) under stringent conditions and encoding a protein having the same property as that of the~~

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~~protein encoded by the nucleotide sequence represented by SEQ
ID NO:11;~~

~~——(lxxix) a nucleotide sequence represented by SEQ ID
NO:13;~~

~~——(lxxx) a nucleotide sequence hybridizable with a
nucleotide sequence which is complementary to the above
nucleotide sequence (lxxix) under stringent conditions and
encoding a protein having the same property as that of the
protein encoded by the nucleotide sequence represented by SEQ
ID NO:13;~~

~~——(lxxxi) a nucleotide sequence represented by SEQ ID
NO:15;~~

~~——(lxxxii) a nucleotide sequence hybridizable with a
nucleotide sequence which is complementary to the above
nucleotide sequence (lxxxi) under stringent conditions and
encoding a protein having the same property as that of the
protein encoded by the nucleotide sequence represented by SEQ
ID NO:15;~~

~~——(lxxxiii) a nucleotide sequence represented by SEQ
ID NO:17;~~

~~——(lxxxiv) a nucleotide sequence hybridizable with a
nucleotide sequence which is complementary to the above
nucleotide sequence (lxxxiii) under stringent conditions and
encoding a protein having the same property as that of the
protein encoded by the nucleotide sequence represented by SEQ
ID NO:17;~~

~~([[lxxxv]] lv) a nucleotide sequence represented by
SEQ ID NO:19;~~

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(lxxxvii) lvi) a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence (lxxxv) lv) under stringent conditions and encoding a protein having the same property as that of the protein encoded by the nucleotide sequence represented by SEQ ID NO:19; and

(lxxxviii) lvii) a fragment of these nucleotide sequences (i) to (lxxxvi) lvi).

78(Withdrawn). A process for producing a protein which comprises culturing cells transformed with the nucleotide sequence (xxxiv) xvi) to (xlii) xxiv), (lxi) xliii) to (lxvi) xlvi), (lxxxv) lv) or (lxxxvi) lvi) of claim 77 or a fragment thereof, and collecting mBSSP4 produced.

79(Withdrawn). The process according to claim 78, wherein the cells are *E. coli* cells, animal cells or insect cells.

80(Withdrawn). The method according to claim 68, wherein the specimen is a body fluid.

81(Withdrawn). The method according to claim 69, wherein the specimen is a body fluid.

82(Previously presented). A method for screening for an inhibitor of serine protease comprising comparing the enzyme activity of the protein according to claim 76 upon bringing it into contact with a candidate compound with the

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enzyme activity of the protein without contact with the candidate compound.

83(Previously presented). A pharmaceutical composition comprising the protein according to claim 76.

84(Withdrawn). A method for detecting a diagnostic marker for diseases in tissues comprising the protein according to claim 76, which comprises using the antibody against the protein according to claim 76.

85(Withdrawn). The method according to claim 83, wherein the marker is used for diagnosis of a cancer.